



U.S. Department of Energy
Transportation External Coordination Working Group Meeting
Minneapolis, Minnesota
September 20-22, 2004

The U.S. Department of Energy (DOE), Transportation External Coordination Working Group (TEC) held its 23rd meeting on September 20-22, 2004, in Minneapolis, Minnesota. Ninety-six participants, representing national, State, Tribal, and local government; industry; professional organizations; and other interested parties, met to address a variety of issues related to DOE's radioactive materials transportation activities. The TEC process includes the involvement of these key stakeholders in developing solutions to DOE transportation issues through their actual participation in the work product. These members provide continuing and improved coordination between DOE, other levels of government, and outside organizations with DOE transportation-related responsibilities. These notes do not represent final DOE positions or policy and only summarize discussions that may help inform DOE program activities.

Presentations from this meeting as well as the agenda and a listing of participants can be found on the home page of the TEC Website at <http://www.ntp.doe.gov/tec>.

DAY 1: September 20, 2004

TOPIC GROUP MEETINGS

Tribal Issues Topic Group -*Judith Holm (DOE/RW) and Jay Jones (DOE/RW)*

At the beginning of this Tribal Issues Topic Group meeting, Judith Holm, DOE, Office of Civilian Radioactive Waste Management (RW), turned over DOE lead to Jay Jones (DOE/RW). The primary focus of this meeting was a discussion of proposed approaches for tribal interactions concerning Yucca Mountain transportation planning.

Summary:

Judith Holm reintroduced Jay Jones as the new DOE lead for the TEC Tribal Issues Topic Group. This will allow her to focus greater attention on overall RW Institutional Program responsibilities and activities, including Tribal interactions.

Judith also announced the opening of the National Museum of the American Indian on the National Mall in Washington, DC. She made several newspaper and magazine articles available for review by members of the Topic Group and acknowledged the importance of the museum to the American people.

Jay Jones proceeded to give the group an update on RW Transportation activities. He said the RW transportation office is almost fully staffed. The RW Office of National Transportation (ONT) has several major focus areas to be addressed by TEC topic groups: Nuclear Waste Policy Act (NWPA) Section 180(c), Security, Routing, Infrastructure Acquisition, Operations, Institutional, and Nevada Rail. Jay provided an update on each of the four project areas into which ONT is divided:

Institutional:

The RW *Transportation Strategic Plan* has been developed and includes guiding principles for interaction with Tribes, States, and regional groups.

The Tribal Issues Topic Group is one element of the RW Institutional Program. Jay Jones will also be co-chairing the new TEC Rail/Routing Topic Group (a transition from the Rail Group). RW, in coordination with its stakeholders, plans to identify a suite of regional transportation routes to Yucca Mountain within the next two years.

Operational Planning:

This element of the RW program includes Security. The Security Topic Group met on September 21 in Minneapolis (meeting summary will be available online at the TEC Website in the near future). Other operational activities include development of an Optimization Model and the TRAGIS model (managed by the Oak Ridge National Laboratory (ORNL), and demonstrated in Minneapolis).

Fleet Acquisition:

RW staff has been meeting with cask vendors to identify the transportation infrastructure needed for Yucca Mountain shipments.

Nevada Rail:

Rail has been identified as the mode of choice for Yucca Mountain shipments and the *Rail Alignment Environmental Impact Statement* (EIS) process is underway. The EIS should be finalized in 2006. The National Environmental Policy Act (NEPA) process for development of the EIS will involve States and Tribes along the Caliente corridor in Nevada.

Richard Arnold (Las Vegas Indian Center) followed Jay's update. He said a Tribal update meeting was held in Nevada and involved the 17 Tribes and organizations with cultural and historical ties to Yucca Mountain. They are trying to get back on schedule and hold meetings twice a year. A writing group of seven or eight people is putting together a resource document about transportation for use in the *Rail Alignment EIS*. Next month they will begin collecting comments from Tribes.

Ed Gonzales (ELG) asked DOE about the status of the *Implementation Plan* for the DOE Indian Policy. Catherine Volk [DOE/Office of Environmental Management (EM)] responded that the Plan that was put together a few years ago by EM staff was not well received in certain DOE organizations (some wanted a plan for each individual DOE organization). It was noted that DOE Secretary Abraham recently sent out a letter to Tribal leaders as follow-up to the 2004 Secretarial Summit (copies were distributed to the group) soliciting their input on future Tribal interactions with DOE. Jay said that ONT's *Strategic Plan* addresses Tribal interactions. At this point, Jay and Catherine Volk committed to take another look at the *Implementation Plan*. Jay

also mentioned that RW might send staff to the Intergovernmental outreach meetings with Tribes to cover RW issues.

Catherine Volk then gave an update on EM program activities. Dennis Ashworth is the new Director of Transportation in EM. Safety and operational excellence are the main goals of the program. The four EM key program elements are Legislative Liaison and Regulatory Support; Site Support and Logistics Services; the Risk Reduction Support Group; and Emergency Management, Security and Outreach Support. As part of the last program element, the Transportation Emergency Preparedness Program (TEPP) is planning a field exercise with the Navajo Nation (TEPP Region 4 in Albuquerque, NM). Catherine reiterated EM's commitment to following the DOE Indian Policy, focusing on preservation of cultural resources in the event of a transportation accident. Upcoming EM activities include: a training needs assessment, Transportation Safety Workshop (to be held in the March timeframe), a Transportation Community Awareness Emergency Response (TRANSCAER®) Workshop, exercises, commodity flow surveys, and post transportation accident investigations. Catherine said DOE's State and Tribal Government Working Group (STGWG) is still active; Brandt Petrasek (DOE/EM) is the point-of-contact.

The main discussion of the Tribal Issues Topic Group meeting centered on approaches for DOE Tribal interactions concerning Yucca Mountain. Jay said his announcement at the April 2004 TEC meeting that RW was planning a transportation meeting with Tribal leaders in 2004 was a little overambitious. The meeting will probably happen next year. Forty Tribes have been identified along the potential rail and highway routes to Yucca Mountain. The next step is to contact those tribes about the RW program. There are three options for contacting the Tribes:

- One large meeting with Tribal leaders (this was the original plan and will probably be deferred)
- Regional meetings
- One-on-one meetings with individual Tribes (this is the proposed approach, for now)

RW is drafting a letter to Tribal leaders to initiate discussions with them and their staff on transportation issues. Jay and other RW staff will most likely begin working with individual Tribes along the transportation corridor after the letter is mailed out. Jay opened the floor up to participants for their thoughts about what should be included in the letter, how DOE should begin the process of talking with Tribes, and other issues for consideration in future interactions. The following key concerns were identified:

- Respect and patience. Richard Arnold pointed out that the typical 30 minutes allowed for Questions and Answers (such as in the 2004 Secretarial Summit) is not appropriate. Tribal leaders should be allowed to ask questions until they are all answered.
- Ask the recipients of the letter to pass it to appropriate Tribal members for their review and comment.
- In addition to Tribal leaders, consider sending the letter to cultural resource designees and Tribal Historic Preservation Officers [Corina Williams (Oneida Nation) suggested RW contact Bambi Krause of the National Historic Preservation Office about Tribal Historic Preservation Officer contacts.]

- When meeting with the Tribes (or writing to them), identify other Tribes that DOE has worked with in that region and ask the Tribes let you know if there are any other Tribes in the region of interest that should be contacted.
- Appropriate level of DOE management contacting appropriate level of Tribal leadership.
- There are two levels of contact: the project level (where the work gets done on project specific activities) and the policy level (where the management decisions are made). In future interactions, RW should consider overlapping jurisdictions at the policy level.
- DOE must consider cultural and religious areas and impacts (these areas are more than you can touch and see). Learn about Tribal hunting areas and the presence of plants used by Tribes.
- Consultation and discussion are two separate things.
- Need to identify protocols and consider different levels of processes involved in Tribal decisions in the beginning of the planning process.
- Ask Tribes to let DOE know of other traditional Tribes located in the geographic area to be impacted.
- Local DOE contacts need to knock on Tribal doors and refer to the DOE/S-1 letter sent to Tribal leaders; make presentations to Tribal Councils.
- A lack of response on the Tribe's part does not mean lack of interest.
- When meeting with Tribes, walk in with an outline of what you want to achieve and how you plan to achieve it.

During these discussions, Ed Gonzales mentioned that the Indian Reservation Roads Final Rule has been published in the *Federal Register* (July 19, 2004) and includes a section dedicated to DOE.

Judith Holm stated that the group needs to increase participation of tribal organizations, especially from the 40 Tribes on the Yucca Mountain corridor. Richard Arnold said it is important to consider lands outside the ½ mile limitation DOE puts on Tribal lands along transportation corridors in EISs. He suggested DOE consider all Tribes who were party to a particular Treaty and other Tribes who have been removed from the lands in question. Richard also recommended that RW "cc" DOE Tribal Points-of-Contact and ask them to provide RW with any known Tribal concerns. Dan King (Oneida Nation) cautioned DOE on the sensitivity of the Potawatomi Community in Wisconsin over the recent Crandon Mining Company conflict and its impact on Tribal resources.

Ed Gonzales reported on Tribal interactions in the State of New Mexico (NM). He said that NM takes the approach of Memoranda of Understanding (MOUs) and Memoranda of Agreement (MOAs). Working Groups also play a key role. A State Tribal Summit is being held in NM November 9-10, 2004 (attendance is by invitation only) to adopt an Executive Order and policy statement on transportation. The number one issue will be hazardous materials (HAZMAT) transport. Ed suggested DOE might benefit from the MOU/MOA approach. If that approach is taken, DOE should develop an MOU template (for Yucca Mountain transportation issues) and

get feedback and input from the Tribes. Richard Arnold pointed out that some Tribes choose not to use MOUs, but they are still equal players in the consultation process.

The rest of the Tribal Issues Topic Group session centered on 180(c), security, and rail/routing. Gary Lanthrum, Director, RW Office of National Transportation (ONT), was asked when 180(c) funding would become available. Gary replied that funding would probably start in 2006; planning, base and variable grants are under discussion. When asked how long the funding would be available, he replied that funding would be available for the duration of the Yucca Mountain shipments. Technical assistance grants would be available until the stakeholders feel technically competent.

Key security components identified include development of a *Classification Guide* and *Security Plan*.

The Rail/Routing Group will be concentrating on identification of criteria for selection of the suite of transportation routes.

Jay wrapped up the session by telling members he would email the revised Tribal leader letter for their review and comment and would schedule a conference call in October.

Action Items:

1. Develop letter from Gary Lanthrum (DOE/RW) and follow up with phone calls and visits to Tribes - Jay Jones/Judith Holm (DOE/RW)
2. Revisit the Implementation Plan for the DOE and Catherine Volk (DOE/EM) Indian Policy – Jay Jones/Judith Holm (DOE/RW).
3. Develop a cover sheet for the list of 40 Corridor Tribes:
 - Explain selection criteria
 - Insert map of shipment origins and Tribal lands (showing Tribal and non-Indian populations on Indian lands)
 - Solicit greater Tribal participation in the TEC Tribal Topic Group

Administrative Actions:

1. Circulate Indian Reservation Roads Program (IRR) Federal Register Notice to group - Ed Gonzales (ELG)/Wilda Portner (SAIC).
2. Update Tribal Leaders List – University of New Mexico (UNM) Contractor Staff
3. Approach individuals on 40 Tribes list about participating in TEC - Jay Jones/Judith Holm (DOE/RW).
4. Contact Bambi Krause (National Historic Preservation Office) to obtain names and contact information for Tribal Historic Preservation Officers - Jay Jones/Judith Holm (DOE/RW).
5. Provide Bambi Krause contact information to Jay and Judith - Corina Williams (Oneida Nation).
6. Email group revised Draft Tribal Leader letter for review and comment - Jay Jones (DOE/RW)/ Wilda Portner (SAIC).
7. Set up October conference call for group members - Jay Jones (DOE/RW)/Wilda Portner (SAIC)

DAY 2: September 21, 2004

TOPIC GROUP MEETINGS

Section 180(C) Topic Group – *Corinne Macaluso (DOE/RW)*

Summary:

Corinne Macaluso was the DOE presenter for this meeting, with assistance from Elizabeth Helvey (Bechtel/SAIC Company, LLC).

During this meeting, Topic Group members discussed five issues associated with Section 180(c) funding and training. Comments and suggestions were provided to DOE for consideration. The five issues were: (1) funding distribution method; (2) funding allocation method; (3) revision of the 1998 Proposed Policy and Procedures; (4) allowable training activities; and (5) level of training. Topic Group members had begun addressing these issues prior to this meeting through the review of four draft issue papers on these subjects and through several teleconferences. Below is a summary of the discussion/comments on each issue.

Discussion and Comments on Funding Distribution Method:

Prior to the meeting, DOE provided Topic Group members with a draft discussion paper on the funding distribution method. The paper discussed the pros and cons of three options for distributing Section 180(c) funding. The options were: (1) direct grants to States and Tribes, (2) cooperative agreements with States and Tribes, and (3) cooperative agreements with State Regional Groups (SRGs) and grants to Tribes. RW/ONT is recommending to DOE management option (1). Comments/suggestions included the following:

- A question was raised as to whether DOE's Office of the General Counsel (GC) would revisit its ruling that 180(c) funding to States cannot be distributed through SRGs (due to the specificity of the NWPA 180(c) language). This ruling rules out option 3. Corinne Macaluso responded that as long as the Congressional language has not changed, GC is

unlikely to revise its ruling. She stated that the SRGs can be involved in other ways, e.g. interactions with States on the best use of funds, etc.

- Several state representatives suggested that DOE not be too prescriptive in designating the appropriate receiving agency within a state for Section 180(c) funds. Because the appropriate agency within a state will vary state-by-state, they recommended that the issue of which agency gets the funding should be settled in-state.
- Corinne Macaluso noted that DOE is considering adding a definition of “public safety official” and then it would be left to the states to decide who gets the funding consistent with the definition.
- Don Flater (Iowa) emphasized the importance of DOE oversight to ensure that the funds are used for the intended purpose.
- Several members expressed their desire for a simple grant process, with minimum reporting requirements. It was suggested that DOE develop the framework for spending grant funds but without prescriptive requirements. Several members recommended following the U.S. Department of Transportation’s (DOT’s) Hazardous Materials Emergency Preparedness (HMEP) grants program guidelines, which has simple reporting requirements.
- Frank Moussa (Kansas) suggested that when DOE sends a letter to the governor announcing eligibility for the grant, that the letter mention who in the state has been helpful in developing the program and could be a resource for the governor.

Discussion and Comments on Funding Allocation Method:

- Prior to the meeting, DOE provided Topic Group members with a draft discussion paper on the funding allocation method. The paper discussed various allocation approaches used or considered by DOE, formula-based approaches of DOT’s HMEP program and of the Western Interstate Energy Board (WIEB), and impacts of Homeland Security Presidential Directive/Hspd-8. With this as background, several SRGs added to the table for consideration their proposals for a formula-based approach for the “variable” funding allocation (in addition to a set allocation for planning and for base program).
- Tim Holeman, WIEB, presented the formula in WIEB’s 2002 resolution, which allocated 75 percent of funding based on number of shipments/miles in a state, and the remaining 25 percent for discretionary funding.
- Thor Strong (Michigan) presented CSG-MW’s recommendation for an HMEP-like allocation formula, which includes 4 elements for the variable portion:
 - 3/10 based on percentage of population along route corridors
 - 3/10 based on percentage of route miles
 - 3/10 based on percentage of shipments
 - 1/10 based on number of shipping sites (mostly power plants but also DOE sites, interim storage or other sites where Yucca Mountain shipments would originate)
- Bill Sherman (Vermont) presented CSG-ERC’s recommendation for an allocation formula:

1. \$200,000 for each eligible State or Tribe for an annual base amount and \$100,000 for each State or Tribe annually for training grants.
 2. The remaining funds would be allocated according to a formula as follows:
 - a. Total population (5/10 percent)
 - b. Total miles (3/10 percent)
 - c. Percent of shipments (2/10 percent)
- The Southern States Energy Board (SSEB) has not yet provided its recommended allocation method.
 - The SRG's took it as an action item to meet outside of the Topic Group meeting to discuss the various formula proposals. [*They did meet that evening to discuss a formula that would be amenable to all four of the SRGs and will continue to address this issue.*]
 - Other suggestions made by Topic Group members included the following:
 - Several members noted that a decision on the allocation method is highly dependent on the mode and route selections.
 - Several members suggested that DOE should first identify what 180(c) funding will be available (or at least identify what DOE is requesting in the budget) before determining the allocation method. Others believed that the allocation process should be determined first, regardless of the amount of money available. Another suggestion was for DOE to identify results of previous life-cycle cost analyses for the Yucca Mountain transportation program.
 - Dan King (Oneida Nation) noted that how population is counted can make a difference in the allocation formulas. He gave the example of Department of Homeland Security (DHS) grants where counties and the Tribes were both claiming tribal and non-tribal population and roads. Corinne Macaluso asked if the Tribes would make a recommendation on an appropriate funding formula. It was agreed that this would be an appropriate issue for the Tribal Topic Group to address.
 - Judith Holm commented on the need to recognize that the first few years' funding will have to allow for start-up costs (for transportation readiness), which has not really been addressed to-date. Then, the costs should level out.

Discussion and Comments on Revision of the 1998 Proposed Policy and Procedures:

As background, DOE is readdressing the 1998 Policy and Procedures Federal Register Notice to see where it may need updating. The Topic Group had for comparison an outline of the 1998 document and an outline of a potential revised document.

- Tammy Ottmer (WIEB/Colorado) asked how the comments received by the Department on the 1998 Proposed Policy & Procedures had been addressed; Corinne Macaluso explained that those comments had been incorporated in the four draft issue papers under development by the Topic Group, and should be captured in the next Federal Register Notice.
- Tim Holeman (WIEB) urged that the policy statement for the next revision be expanded to more fully address the concerns of officials along the routes, i.e., the consequences of accidents. He suggested that the policy statement should acknowledge that accidents

can happen (even though the probability is low due to safety measures) and that is why State, Tribal and local governments are being trained along corridors – to be able to mitigate the consequences of an accident. He noted that public perception of risk is not the same as DOE or the Nuclear Regulatory Commission's (NRC's) statements of risk.

- More discussion continued on whether to use a needs-based approach or a formula-based approach on allocating 180(c) funds (see previous discussion on Allocation Method). Harlan Keaton (SSEB/Florida) pointed out that percentages may not meet needs; States need to know how much money is available to determine whether percentages will meet needs. Dave Crose (CSG-MW/Indiana) stated that in order to know how much it will cost, you need to know what your needs are – first figure out how much it will cost you, then divvy it up percentage-wise.

It was observed that the HMEP approach takes needs into account – by identifying population or miles you roughly capture needs as well. It was observed that needs assessments will be done by States, and those assessments will be reflected in a grant application package.

- In response to concerns expressed by Topic Group members, the Department has decided to delay publication of the draft Federal Register Notice containing revised Policy and Procedures until March/April 2005, which will allow the group to continue meeting through the end of this year.
- Several Topic Group members had to leave the meeting to participate in another topic group; the request was made that there be no overlap in topic group meetings at future TEC meetings. Corinne Macaluso suggested that the group might consider meeting once more this fall.

Discussion and Comments on Allowable Activities:

This discussion addressed what types of activities are covered under 180(c) funding. Topic Group members were provided a draft issue paper for review and comment. Comments are due to Corinne Macaluso by September 27th, and she will then issue a subsequent draft.

- A key theme during the discussion was the suggestion that DOE not be too prescriptive in detailing what activities should be covered. Instead, DOE should identify the “types” of activities and let the States and Tribes determine the specific activities that fall under the activity types, as well as “who” specifically gets the training. Corinne said that DOE will rewrite the issue paper to be less prescriptive and will include a list of activity types.
- The Topic Group posed several examples of activities to get a better feel for what was inside the boundaries or outside the boundaries of training activities (e.g., staff time for inspections, implementation activities, overtime pay for firefighters to take the training, hospital personnel training, rad surveys, etc.). Corinne Macaluso emphasized that 180(c) funding is limited to training and training-related activities. She noted that certain activities are still under discussion with GC to determine their applicability under 180(c) funding, such as training of hospital staff and rad surveys.
- The Topic Group addressed the issue of how to fund Tribes for rail inspection training. Michelle Sampson, Federal Railroad Administration (FRA), explained that the FRA State inspection program does not cover tribes. While legislation can be changed, that would be a long-term option. She expressed the FRA's willingness to work with DOE and the tribes to provide expertise and information to tribes through informal interactions, and

possibly working through the 180(c) technical assistance requirement. It was reported that the Tribal Topic Group had discussed addressing this issue in the forthcoming letter to Tribal leaders from Gary Lanthrum and the Topic Group participants.

Discussion and Comments on Level of Training:

This discussion addressed what levels of training should be covered under 180(c) funding. Topic Group members were provided a draft issue paper for review and comment. Comments are due to Corinne Macaluso by October 4, 2004 and she will then issue a subsequent draft.

- It was agreed that the paper should be reformatted for continuity/readability.
- Several members suggested that DOE leave it up to the states and tribes to determine the appropriate levels of training required for their various departments and disciplines. DOE should not be the one to determine whether someone needs awareness training vs. operational level training. DOE should be sensitive to the requirements of Occupational Safety and Health Administration (OSHA) 1910.120, particularly as prescribed in the Department of Labor Letters of Interpretation.
- Steve White (Massachusetts) urged DOE to address what kind of recertification will be allowable and to what level.
- The group considered the perspective of 180(c) training versus DHS training perspective. Tammy Ottmer (Colorado) observed that since DOE headquarters hasn't negotiated the impact of the Hspd-8 on 180(c), the issue paper should include the homeland security information for informational purposes but moves it to the end of the document; don't address it as a current issue for 180(c) consideration.
- Corinne Macaluso noted that RW is establishing contact with DOE's Office of Energy Assurance and with EM to determine what the Department is doing to address Hspd-8. However, at this time nothing in Hspd-8 alters 180(c) activities. It was noted that Hspd-8 is not intended to conflict with existing laws and regulations. Thor Strong (Michigan) observed that a goal for discussions with DHS should be to establish that DHS/Department of Justice (DOJ) training for radioactive response and TEPP training should be sufficiently consistent that a responder to a dirty bomb incident should be able to respond to a spent nuclear fuel (SNF) cask incident - - to minimize the training time and costs required by jurisdictions.
- There was some discussion as to whether the Federal Register Notice should reiterate the need for States/Tribes to integrate training from other Federal agencies, or whether the integration has to be done at the national level.
- Tammy Ottmer pointed out that the funding going to States for radiological response is not focused on preparing for radioactive materials transportation. The DHS funds should not count as preparedness for radioactive materials shipments, because the funds are not transportation-specific.

Other Issues:

- Elizabeth Helvey suggested that the group consider the 1998 policy with regard to curriculum, and whether the 1998 approach is still sufficient. It was observed that the group still needs to address equipment/funding issues – whether there should be a

percentage cap as in the 1998 Federal Register Notice? What should the percentage be? What about calibration?

- Corinne Macaluso handed out a draft matrix of standards and regulations related to barge shipments. She asked for the input of topic group members in developing the matrix. It was noted that the SSEB and The Council of State Governments – Eastern Regional Conference (CSG-ERC) have discussed developing a study on barge transport.
- Thor Strong volunteered to give the Topic Group's summary at the plenary session.

Action Items:

1. Topic group members will provide comments on the Allowable Activities issue paper by September 27, 2004, the Level of Training issue paper by October 10, 2004, and the Revised Policy and Procedures Outline by October 18, 2004.
2. DOE will re-issue revised papers that incorporate comments and reflect the Topic Group meeting discussion (1-2 week turnaround).
3. The four SRGs will continue to evaluate proposed allocation methods and will provide feedback to DOE.
4. The Tribal Topic Group will take up the issue of a formula for allocation.
5. Topic group will consider equipment funding issues.
6. Issue of hospital training and rad surveys will be discussed with DOE General Counsel.
7. DOE will review Department of Labor letters of interpretation re: OSHA 1910.120

Rail Topic Group – Steven Hamp (DOE/NTP) and Jay Jones (DOE/RW)

Rail Topic Group Discussion paper - Steven Hamp (DOE/NTP)

Mr. Steven Hamp started the meeting with introductions and announcing that the topic group will be co-chaired by Mr. Jay Jones. The topic group will be expanded to focus on the drafting and addressing baseline routing criteria. Before discussing the new direction that topic group will take, Steven reviewed what the focus of the topic group has been for the last two years. Namely, Steven summarized the four reports that the topic group had produced, the most recent report being a discussion paper entitled "Rail Routing-Current Practices and Comparative Analysis (2004)." All of the reports are available on the TEC web site. Steven also mentioned that the discussion paper is available for the larger TEC membership to review and provide comments.

Comments on Rail Routing Paper:

- Several members commented that the final Rail Routing paper was not formally released to the larger TEC membership for review. One member understood that the final Rail Routing paper would be released to the larger TEC audience; comments would be compiled, and then presented to the Rail Topic group for further discussion before finalizing the Rail Routing Paper. Steven Hamp responded by saying that the Topic Group has followed the protocol of other topic groups for releasing papers to the larger TEC membership. This paper is a product of the Rail Topic Group but it is anticipated that there will be further discussion from the larger TEC audience. Steven also mentioned that the discussion paper is currently on the TEC web site, thus available for review. Gary Lanthrum suggested that the topic group elicit feedback on the paper from the larger TEC.

- One participant noted that the Rail Routing paper does not address the legal weight truck cask issue and the inter-modal proposal which is different from direct rail. Steven Hamp reiterated that the paper is generic and not operation oriented.
- Another participant noted that the rail group had initially developed a list of activities to undertake with rail routing being the first. It was suggested that this list be reviewed.

Summary of the Office of National Transportation (ONT) Projects - Jay Jones (DOE/RW)

As an update from the April 2004 TEC meeting, Jay Jones briefly summarized the projects and initiatives being undertaken by the Office of National Transportation (ONT). ONT has made steady progress in its four project areas: Institutional, Operational Planning, Fleet Acquisition, and Nevada Rail. Judith Holm is in charge of the Institutional Program, Nancy Slater-Thompson heads up Operational Planning, Ned Larson is responsible for Fleet Acquisition and Robin Sweeney (RW/ORD) is leading the development of Nevada Rail. Jay mentioned that ONT is working with Operations to make sure all activities are integrated. Nancy Slater-Thompson has been working on transportation modeling, specifically, TRAGIS and the Investment Planning Modeling Tool. Part of the effort involves trying to inform the states on how these models work. It has been recommended that ONT set up training programs early next year for the state regional groups on these modeling programs.

Jay noted that Gary Lanthrum would provide a more detailed update of ONT's recent activities during the Program Updates session the following day. Jay turned the meeting over to Judith Holm for the route decision process discussion.

Draft Route Decision Process - Judith Holm (DOE/RW)

Judith Holm presented an overview of the Draft Route Decision Process Chart. Emphasizing that routing will be an iterative process; she noted that TEC is a broad-based organization involving industry, States, Tribes, professional associations, and others. It is important to capture this broad exchange of views. Information from the stakeholder meetings such as TEC can be taken back to their larger constituent groups. State regional groups will be able to go into more depth on routing criteria. Once the criteria are developed, they can be applied to the possible routes run through the Transportation Routing Analysis Geographic Information System (TRAGIS). The goal is to identify a regional suite of routes. The Transportation Logistics Model is currently in development. The end result is an operational plan and routes for campaigns.

Comments on Route Decision Process:

- One participant asked how all the information from the Rail Topic Group would come into play and how the information would be integrated. Judith responded that the information would be provided to each of the member groups which provide comments. The resulting criteria are then applied to the model. Judith also emphasized that there will still be opportunities throughout the entire process for discussion.
- Two participants raised the issue that the carrier is still unknown and, because of this uncertainty, it seems pointless to develop criteria. There also seems to be a consensus that the topic group needs to know whether DOE or whether carriers will dictate routes. Gary Lanthrum responded by stating that there is no DOE policy yet. Judith also replied that DOE needs to start somewhere and what is important is identifying criteria rather than

the routes at this point in the process. In addition, DOT suggests that shippers and carriers work together to determine routes.

- One participant asked if DOE can include in the contracts that the rail company making the routing decision can also meet certain criteria. Judith responded that this could be written in the contracts.
- One participant raised the issue of dedicated trains specifically as it pertains to the State of Nevada. It was also mentioned that the State of Nevada has recently lodged a lawsuit against DOE. Gary Lanthrum responded by stating that since DOT has not issued their dedicated train study, no decision has been made by DOE on the use of dedicated trains.
- One participant inquired as to the status of the FRA study on the use of dedicated trains. Bob Fronczak, Association of American Railroads (AAR), stated that the study is supposed to be completed later this year. With regard to this study not being completed as yet, DOE does not want to delay working on the routing criteria. The information from the FRA study can be plugged into the routing criteria decision process. Gary Lanthrum reiterated that if any new regulatory information was released, DOE would certainly make the appropriate changes.
- One participant expressed concern about the clarity of what this topic group is doing and what the regional groups are doing. Currently the Midwestern groups are going through their route decision process. Judith noted that TEC is a broad-based organization involving industry, States, Tribes, professional associations, and others. It is important to capture this broad-based viewpoint in addition to what is developed by the state regional groups.
- One participant asked what would happen if DOE does not agree with the routes suggested by the regional groups and the States. Judith responded by saying she felt that DOE and the other groups would not be that far off in terms of routing.

Draft Task Plan and Factors Matrix –Jay Jones (DOE/RW)

Jay Jones presented a draft task plan to the Topic Group with a tentative schedule that the Topic Group would follow to complete the recommendations for Baseline Routing Criteria. At the next TEC meeting, the draft Baseline Routing Criteria would be finalized. Jay stated that the dates on the schedule were based on internal milestones developed by RW. The factors matrix was given to the Topic Group as background information to demonstrate that a base exists in regulation and practice for current shipments. Jay opened the meeting up to the members to ask questions and get comments about the Task Plan and the Factors Matrix.

Comments on the Draft Task Plan and Factors Matrix:

- One participant asked how DOE was going to go forward with baseline routing criteria without knowing about dedicated trains. A suggestion was made to develop one set of routing criteria for dedicated trains and one set of criteria for general rail service. Comment noted.
- Several participants noted that it appears the Topic Group will now be addressing other modes of transportation, yet the group is called the Rail Topic Group. Jay stated that the Topic Group will focus on identifying routing criteria, addressing rail as the main mode of transportation so the topic group name should incorporate the routing activity. Steven also

responded that the emphasis will be on rail and thus the topic group name should remain as such.

- One participant suggested that the purpose statement in the Draft Task Plan be broadened to include barge, highway, legal weight truck, overweight truck, etc. Jay will rewrite the purpose statement and send to the topic group for review.
- One participant suggested modifying the Draft Task Plan approach to include the identification of unique local conditions. An example that was cited was the 20-year restructuring efforts being undertaken by DOT in the Chicago area.
- Another participant noted that the word “criteria” could cover a multitude of things. They suggested that special conditions pertaining to criteria be added in the purpose statement.
- One participant asked if the factors included in the matrix were listed in any particular order. Judith responded and said that the factors presented had not been prioritized.

Action Items:

1. The purpose statement in the Draft Task Plan will be revised to include other modes of transportation, specifically barge, highway, legal weight truck and overweight truck.
2. Column Title headings will be added to every page for the Factors Matrix.
3. All comments pertaining to the Draft Work Plan and Factors Matrix should be sent to Jay Jones (DOE/RW), Julie Offner (BAH) and Michele Enders (SAIC) by October 14, 2004.
4. Jay Jones and Steven Hamp will send out an e-mail the week of September 27th detailing the issues raised during the Topic Group meeting and the proposed dates for the monthly conference calls.

Security Topic Group – *Nancy Slater Thompson (DOE/RW)*

Opening Presentation:

As the DOE Office of National Transportation (ONT) prepares the plans, procedures and protocols necessary to support shipments of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) to a repository at Yucca Mountain, the TEC Security Topic Group (STG) will provide a forum for an ongoing dialogue among State, Tribal, and local governments, carriers, and ONT on transportation security. The meeting objectives were to organize the Security Topic Group and to begin the process of developing a common picture of transportation security as it applies to the transportation of spent nuclear fuel to the repository at Yucca Mountain.

Members for the STG were chosen from nominations provided by the State Regional Groups, Tribes along the transportation corridors in the Yucca Mountain Final Environmental Impact Statement, and from known subject matter experts. The membership balances professional specialties involved in transportation security, including: law enforcement/homeland security, emergency response, and policy and planning. Membership and attendee lists are attached to the meeting minutes.

In summary, the STG will assist the Office of National Transportation (ONT) by:

- Providing input on State, Tribal and local transportation security issues as the ONT prepares the plans, procedures and documents in support of spent nuclear fuel and high-level waste (SNF/HLW) shipments to the Yucca Mountain Repository.
- Providing a forum for an ongoing dialogue among the represented State, Tribal, local government and carrier organizations on transportation security of shipments of SNF/HLW to the Yucca Mountain Repository.

General procedures for the operation of the STG were discussed. The members of the STG will be the core group for discussions and information exchange and were requested to attend all the conference calls and meetings. If unable to participate due to a conflict, STG members were asked to designate an alternate to represent them for that specific session. The status of STG activities will be reported at the semi-annual TEC meetings.

As part of their future work on the STG, members may be given access to information that is security sensitive. In order to ensure that the members understand DOE requirements for accessing sensitive information, a training session on Operation and Information Security was presented following the Topic Group meeting. ONT does not anticipate that clearances will be needed in the near future by STG members. Members with active clearances were requested to identify the type of clearance they possess as well as the Federal agency sponsoring the clearance. ONT staff is working to identify a process for obtaining clearances for those STG members who do not possess one at this time, if clearances are required in the future.

Members requested that:

- Conference calls be coordinated with the other topic groups [especially the Section 180(c) group] to minimize conflicts,
- Nancy Slater Thompson attend the upcoming State Regional Group meetings,
- Additional input to the issues, opportunities and challenges discussion be provided by the law enforcement and homeland security members who were unable to attend the first meeting due to schedule conflicts, and
- The development of security plans and procedures be kept simple and to the extent possible be compatible with the plans and procedures of other Federal agencies, e.g., DHS and NRC.

Developing a Common Picture of Security:

The STG participated in a facilitated group exercise aimed at developing a common understanding of the issues, opportunities and challenges of providing security for the transportation of SNF/HLW to a repository at Yucca Mountain. The STG's comments were recorded on white boards and then categorized to facilitate their review. During the final hour of the session, STG members discussed items they believed should be addressed during FY05. The STG input is being compiled and will be provided to STG members in November.

Operation and Information Security:

A training session was conducted for STG and TEC members to introduce the basic principles for protecting security sensitive information. The Federal regulations governing the use of sensitive information were discussed, and STG members worked through several sets of

examples employing information security techniques. Slides for the training session can be found on the TEC website (www.ntp.doe.gov/tec). In addition to the presentation and exercises, participants related specific security lessons learned from other nuclear waste shipping campaigns, including the Waste Isolation Pilot Plant program, Foreign Research Reactor Spent Nuclear Fuel shipments, and cesium¹³⁷ shipments.

NRC Status Report:

Philip Brochman, NRC, reviewed recent NRC security related activities for the STG.

Security Topic Group Report to TEC:

Phillip Paull, the Council of State Governments-Eastern Regional Conference (CSG-ERC), presented a summary of the STG meeting to the TEC plenary. The summary slides can be found on the TEC website.

DAY 3: September 22, 2004

WELCOME AND MEETING OVERVIEW - JUDITH HOLM, (DOE/RW)

Ms. Judith Holm, DOE/RW, Office of National Transportation (ONT), called the meeting to order and welcomed the participants. Judith announced a few housekeeping items which included the opportunity for TEC members to participate in an open mike session at the end of the meeting. Judith acknowledged that with every TEC meeting there are invariably new members that might be not be as familiar with the history of TEC. As such, Judith gave a brief overview of TEC to give the newer participants a foundation of where TEC has been and where TEC is going for the future. Judith stated that TEC has been in existence since 1992 and is comprised of a group of organizations that represent national, State, Tribal and local government organizations, industry and professional groups. The representatives from these groups take the information gathered at the TEC meetings back to their larger constituency. DOE takes the input received from these groups at the TEC meetings and uses this input to produce orders and program initiatives. Judith emphasized that this is a multi-faceted process.

Judith introduced Mr. Gary Lanthrum, Director, RW/ONT, to say a few words. Gary welcomed the participants and briefly mentioned that TEC is going through its own evolution with new activities being undertaken such as security. Gary also commented that the first part of the security meeting that took place the previous day was a closed meeting. Gary stated that TEC is currently looking for ways to have a sensitive issue such as security be discussed in an open meeting for all TEC members.

Judith introduced Senator Mark Ourada from the Minnesota State Legislature. Senator Ourada has been a Congressman for twenty years, a senator for ten years, serves as a member of the Midwest Radioactive Waste Transportation Committee, and is involved in a broad spectrum of activities related to radioactive waste and transportation. Senator Ourada talked about his experience in Minnesota with nuclear transportation and the political battles that ensued from various individuals and groups. Minnesota is home to the Prairie Island Power Plant. Senator Ourada spoke about the 1994 energy bill that called for an expansion of spent storage fuel. This bill became quite a contentious debate but eventually an agreement was reached. Overall, Senator Ourada stated that Minnesota sees nuclear power as a positive item due to the economic gains it has brought to struggling communities in regards to jobs and economic stability.

PROGRAM UPDATES FROM RW AND EM

Office of Civilian Radioactive Waste Management (RW), Office of National Transportation (ONT) - Gary Lanthrum (DOE/RW)

Mr. Gary Lanthrum (DOE/RW) started his presentation by giving a brief review of when the Office of National Transportation was formed and what the office is responsible for in regard to the 2010 waste acceptance timeline. Since the April 2004 TEC Meeting, ONT has made steady progress in its four project areas:

- Institutional
- Operational Planning
- Fleet Acquisition
- Nevada Rail

These areas are considered project areas since the infrastructure of each area still needs to be established. Organizationally, ONT has refined the management structure to handle these project areas. However, it is still challenging to integrate the information from these project areas. The key programmatic interfaces are driven strongly by external drivers. The repository has its own challenges. The Tribal groups will also play a significant role especially in regards to emergency preparedness. Integration with other RW elements has been expanded to include special projects.

Next, Gary presented highlights of accomplishments from each of the four project areas. Under Institutional, two new topic groups were established: 180(c) and Security. Internal planning efforts have integrated Operational and Institutional Projects on cross-cutting issues such as routing criteria and emergency response planning. Gary explained that it takes time with all the contractors to get all the tools in place to implement the program. In the area of Operations, work is well underway on the first draft of the Concept of Operations. Gary also stated that collaboration has started with the Office of Security and Safety Performance Assurance on the Secretary's Security for the 21st Century Initiative. For Acquisition, meetings have already been held with cask vendors and their reports on current cask capabilities have been submitted. A preliminary assessment of capabilities for the Fleet Management Facility has been completed. As for the Nevada Rail project area, dialogue has been initiated with the Tribal governments, landowners, and potential users along the proposed rail corridor. Gary emphasized that this dialogue is important and will continue to be a top priority.

Gary concluded his presentation by saying that while ONT has a myriad of challenges; progress has and continues to be made. The success of this transportation system will greatly depend on sufficient funding.

Comments and Questions:

One participant asked Gary about DOE's ability to do these shipments. Gary responded by saying that DOE has the infrastructure to do the shipments now. The FY2004 budget was given \$577 million and the FY2005 is supposed to grow significantly. However, if DOE does not get the requested funding, it is unknown at this time as to what will get funded. There is a possibility that transportation may not receive the funding needed and the 2010 timeline for being ready may have to be redefined accordingly.

One participant commented that certain counties in Nevada were not allowed to comment or provide input on the Nevada Rail Alignment EIS. Gary responded by saying that DOE believes that they have dealt with the transportation process as fairly as possible. DOE will continue to work with the Nevada counties on funding.

Environmental Management (EM) -Dennis Ashworth (DOE/EM)

Dennis Ashworth introduced himself as the new Director of the Office of Transportation. Frank Marcinowski, Director, Office of Logistics and Waste Disposition Enhancements, was unable to attend.

Dennis explained EM's mission to ensure appropriate disposal sites and said options are in place to enable the accelerated risk reduction and cleanup of sites under the jurisdiction of EM. This includes: 1) management of transportation emergency preparedness and security, route management, transportation operations and dispatch, and assets integration and management, and 2) identify and manage programs for commercial and Federal disposition options.

Next, Dennis provided an update on EM's shipment activities. For the Foreign Research Reactor (FRR) Program, DOE has completed 30 shipments and 6, 334 spent fuel assemblies from 27 countries have been accepted to date. Dennis stated that Secretary Abraham has directed the National Nuclear Security Administration (NNSA) to consolidate the international component of the program within its nonproliferation mission. At this time, specific roles and responsibilities among DOE programs are still being worked out. For the FRR SNF Acceptance Program, the most recent shipment has been three casks from German research reactors to the Savannah River Site (SRS). The next planned shipment will involve two casks of Low Enriched Uranium SNF from Japan in late 2004.

Dennis reviewed some of the Waste Isolation Pilot Plant (WIPP) accomplishments to date. Since March 1999, approximately 23, 697 m3 of contact-handled transuranic (TRU) waste has been shipped and disposed at WIPP. Panel One was filled in March 2003 with 39, 414 waste containers. Panel Two is 73 percent filled. There is only one remaining TRU rail shipment from the Mound Plant in Miamisburg, Ohio to SRS scheduled for FY2005. Next, Dennis gave an update on the Transuranic Packaging Transporter (TRUPACT)-III shipping packages. TRUPACT-III is designed to transport large waste containers of transuranic waste that are too large to fit inside the existing TRUPACT-II shipping packages. The recovery plan has been approved by DOE. It is expected that the plan will include full scale testing.

For the FY2005 status of TRU shipments, Dennis stated that the Rocky Flats Office TRU shipments are projected to be completed in April 2005. The Idaho National Engineering and Environmental Laboratory shipments from the Advanced Mixed Waste Treatment Project resumed the week of September 13, 2004. Significant ramp-up is expected with up to 70 plus shipments per month. The Nevada Test Site (NTS) resumed shipments August 27, 2004 with approximately 31 shipments planned before the end of 2004.

For the Fernald Silo Waste, Dennis stated that Nevada has opposed shipment of waste to NTS based on whether disposition is consistent with DOE Orders and public laws. Nevada's objections were discussed and a letter was sent to Nevada's Attorney General. As it stands now, DOE has recommended to Nevada that a process be developed through NRC in which NRC would make the determination on the appropriateness of disposition at NTS. Other legal matters include the suspension of off-site shipments to DOE Hanford Site, Washington. Since the State of Washington filed to prohibit low-level waste (LLW) and mixed low-level waste (MLLW) from being sent to Hanford, DOE agreed to suspend the off-site waste shipments

during legal proceedings. A court decision is expected on or before November 23, 2004. Due to this suspension, EM is working to identify alternate disposal pathways for the LLW and MLLW wastes requiring disposal in the near term.

Dennis concluded his presentation by reviewing the transportation incidents and the steps EM will be taking to address these incidents. Approximately 10,000 shipments were made in FY2004. Only transportation incidents pertaining to off-site/in commerce shipments are being tracked and identified. EM will be conducting a meeting in early FY2005 to review the incidents with the sites and identify the corrective actions to be taken.

Transportation Infrastructure Update (DOE/RW) - Ned Larson (DOE/RW)

Ned Larson's presentation consisted of an update on the following transportation infrastructure acquisition activities:

- Cask and rolling stock acquisition
- Cask integration efforts to ensure interface with the Yucca Mountain repository and utility sites
- Determining capabilities of commercially available casks
- Support facility development

Ned stated that the project management for the acquisition of capital assets is determined by DOE Order 413.3. This order outlines a phased approach to obtaining approval of projects costing more than \$5 million. ONT projects will be approved at each "critical decision" or phase by a DOE board chaired by the Deputy Secretary. Each decision level marks an increase in commitment of resources. The decision levels are as follows:

- Critical Decision-0 (CD)-Approve Mission Need
- CD-1- Approve Alternative Selection and Cost Range
- CD-2- Approve Performance Baseline
- CD-3-Approve Start of Construction/Fabrication
- CD-4- Approve Start of Operations

Currently, ONT has obtained CD-1 approval for cask acquisition, rolling stock acquisition, support facility acquisition/construction, and Nevada Rail construction. As for cask integration with the repository, coordination efforts are underway to utilize the transportation casks that will be compatible with the Yucca Mountain repository.

Ned stated that all cask capability reports were received from the vendors by August 28, 2004. Meetings with vendors were held in late August and early September to discuss the data and the vendors' ability to meet ONT's needs. Based on the cask capability reports, DOE was able to confirm that 40 percent of commercial SNF can be shipped under current certificates. As a result, few new cask designs or "Category C" casks will be needed for commercial SNF before 2020. However, there is concern about the ability to load a cask with DOE-SNF as the material's owner must certify that the material meets the limits of a Certificate of Compliance's "allowable contents." Ned emphasized that the only fuel shipped during the first five years will be in canisters and no new (category C) casks will need to be developed for DOE material.

Ned moved on to address the escort car procurement status. ONT has met with passenger car manufacturers to discuss the design of the escort car. They have also met with freight car manufacturers who were more cautious about meeting the AAR performance specification. In general, all vendors agreed that the rolling stock acquisition should be included in one contract. There are several advantages for having one contract: 1) one contractor is responsible for integration; 2) standardization in design is more achievable; and 3) rail car interface problems could be resolved by the contractor. Ned stated that a draft request for proposal (RFP) for all rolling stock is planned for early 2005.

For the Fleet Management Facility (FMF), Ned stated that due to funding issues, work on the FMF has been scaled back. There is still flexibility in the schedule to begin operations by the opening of the repository. Cask integration with utilities has occurred with reactor sites. These sites were asked to provide information pertaining to the rated design load lift capacity of cranes. Eighty percent of the sites have responded. Crane lifting capacity will be the primary factor in determining the type of shipping cask a facility can load.

Ned concluded his presentation by saying that ONT has many challenges ahead in procuring the transportation infrastructure to support repository operations. Factors that will influence the transportation infrastructure include: requirements of repository, utilities and DOE defense sites; DOE Orders, industry standards and regulations promulgated by other Federal agencies; and capabilities of vendors to produce transportation infrastructure components.

PLENARY I – DOMESTIC AND FOREIGN TRANSPORTATION EXPERIENCE

Architecture of Transport Systems for Used Fuel and High Level Waste – Examples from Europe - *Frederic Bailly, Manager, Spent Fuel Management Strategy, COGEMA*

After a brief presentation on the products, services, and capabilities of his company, Mr. Bailly focused his presentation on the European experience with spent fuel transportation. The current transportation system in Europe has evolved over many years. More than 1,000 shipments are made each year, including 280 spent fuel shipments and 20 high-level waste (HLW) shipments. More than 70,000 spent fuel assemblies totaling over 30,000 metric tons have been shipped by AREVA. Many of the shipments are delivered to the La Hague treatment plant in Normandy, France.

Spent fuel transportation operational activities are multi-level and include:

- Fuel assembly selection and verification of acceptability at the receiving facility
- Cask selection and verification of reactor license for handling and loading, maintenance status, licensing status with respect to selected fuel assemblies, and availability
- Programming of transport operations
- Delivery of cask and readiness inspection
- Loading of cask and associated checks prior to shipment
- Shipment by rail or truck
- Cask inspection

- Transfer to heavy haul trucks the last 20 miles to La Hague treatment plant
- Cask inspection for non-contamination
- Unloading at La Hague

Codes and benchmarking have been developed to ensure actual payloads will not exceed the licensed thermal and radiation limitations of the cask. Europe has also employed standardization of cask interface features.

Rail transport has been identified as the best solution in Europe. Some shipments are sent in regular commerce and others on dedicated trains. Rail staff education is an important element of transport safety.

The European experience is relevant to Yucca Mountain shipments in several ways including a similar number of shipments, the security studies that have been conducted in Europe on military-type attacks on the casks, and the crisis drills that are held once a year.

Mr. Bailly listed 7 keys to success:

- Dedicated rail car
- Codes and benchmarking
- Standardization of cask interface
- Dry unloading facility
- Make maintenance integral part of the daily process
- Ability to give technical support
- Working closely with local and national authorities and the medias

He summarized by saying that shipping of spent fuel and HLW is possible and is an industrial activity. Transportation is much more than commissioning and handling shipments at facilities. It involves a complex chain of decisions for the long-term reliability and efficiency of a transportation system, for which experience feedback is essential.

Question and Answer Session:

Q: Is there a limit on how many casks can be shipped on a single train (in Europe)?

A: Mr. Bailly did not know the limitations.

Q: Are the casks shipped in regular commercial freight and by dedicated train?

A: Yes

Q: What is the average distance a shipment travels?

A: 1,000 to 1,500 kilometers one way. There are also sea shipments to Japan.

Q: What is your biggest worry in a shipping campaign?

A: In the beginning of the shipments, it was opponents (some individuals who were against the shipments would lie down on the rails). Now the focus is on emergency response

Spent Fuel Transportation International and Domestic Experience - Catherine Anne, Project Manager, NAC International

Ms. Anne opened her presentation with a brief history of NAC International (NAC), which was established in 1968. NAC has been a U.S. nuclear transportation leader since 1974, with 3,200 shipments covering 10 million kilometers. Their dry transfer system has handled over 2,000 assemblies. The company's experience includes participation in the FRR program (shipments from Taiwan, Iraq, Greece, Chile, Colombia, and South Korea, just to name a few), university shipments, nuclear power plant shipments, and shipments related to decommissioning of nuclear facilities. Shipment experience includes both rail and highway across the United States.

NAC currently has eight legal-weight truck casks in use that meet NRC and International Atomic Energy Agency (IAEA) requirements.

Safe transportation requires rigorous regulatory adherence, as well as transportation and security plans, NRC notifications, State coordination and notifications, Radiological Assistance Program (RAP) notifications, TRANSCOM (shipping tracking and communications system) coordination, Commercial Vehicle Safety Alliance (CVSA) inspections, and assistance to the shipper in preparation of transport documents.

The Yucca Mountain shipment process will be very similar to the foreign fuel shipments. However, the volume of shipments will increase from around 20 a year to 170-200 shipments per year.

Catherine summarized by saying SNF transportation is a complex activity with involving multiple regulations and entities, political influence, public acceptance issues, and a target for nuclear opponents. Success is possible and is dependent on use of radioactive and nuclear material experts, use of one main transport coordinator, establishment of a clear chain of responsibility, participation of stakeholders, and establishment of procedures, training, and communication to the general public.

**Plenary II – Office of Environmental Management, Office of Transportation:
Organization Update – Dennis Ashworth (DOE/EM)**

Summary:

Mr. Dennis Ashworth, Director of EM's Office of Transportation, gave a presentation that highlighted EM's reorganization and showed a draft proposal for the organization, mission, functions, and key activities of the Office of Transportation. The EM Office of Transportation is responsible for radioactive and hazardous waste shipments to and from DOE sites resulting from DOE's environmental management and cleanup program (separate from the spent fuel and high-level waste shipments planned under the Office of Civilian Radioactive Waste Management). This office oversees an average of about 5,000 shipments per year of a variety of wastes and materials, including low-level radioactive and mixed waste, TRU waste, and SNF from foreign and domestic research reactors. In 2004, this number doubles to about 10,000 in the year. The Office uses best practices from government and industry to ensure safety and operational excellence for the shipments. Mr. Ashworth highlighted the safe shipment history and provided statistics for the year 2004, noting that there were 25 incidents reported, none of which involved radiological release. He summarized the functions of the Office and its

breakdown into four key functions: (1) Distribution Risk Reduction Support, (2) Transportation Regulatory Support, (3) Site Support and Logistics, and (4) Emergency Preparedness, Security and Outreach. He provided an update of activities and key accomplishments with respect to spent fuel and transuranic waste shipments, as follows:

- Under the Foreign and Domestic Research Reactor Spent Nuclear Fuel Acceptance Program, 30 shipments have been completed to-date (148 casks to SRS and 15 casks to INEEL. This represents over 6,000 spent nuclear fuel assemblies from 27 countries, 5 cross-country shipments, and one west-coast shipment. He noted that DOE is completing a NEPA analysis on extending the deadline for FRR shipments to May 2009. He mentioned that the Material Test Reactor Fuel shipment program is about 60 percent complete, and the shipment program for TRIGA spent fuel is about 86 percent complete. The most recent shipment was in August 2004, from Germany to SRS, which included land transport by truck [both low-enriched uranium (LEU) and high enriched uranium (HEU) fuel]. The next shipment will be two casks from Japan (end of 2004).
- Since opening in March 1999, WIPP has received over 23,000 cubic meters of contact-handled TRU waste, which represented close to 3,000 truck shipments from seven sites, and six shipments from small-quantity sites. He noted that there is one remaining rail shipment from Mound to SRS scheduled for 2005. He provided an update on certification of the TRUPACT-III cask (designed to transport large containers), which is undergoing NRC review and issue resolution. He expects that the plan will include full-scale testing. He provided an update on the remote-handled transuranic waste (RH-TRU) program, for which there are currently 12 NRC-approved RH-72B casks, and noted that WIPP is gearing up to accept RH-TRU.
- He also provided site-specific information on shipments as follows: (1) INEEL resumed shipments (after addressing waste characterization issues) in September 2004 from its Advance Mixed Waste Treatment Program and expects a significant ramp-up (about 70 shipments per month); (2) Nevada has opposed shipments of Fernald silo waste to the Nevada Test Site, and DOE's Office of General Counsel is recommending that NRC make the determination of appropriateness; (3) DOE expects a court decision in November 2004 with regard to offsite shipments of low-level and mixed low-level waste to Hanford. As a result of litigation by the State of Washington, there has been a suspension in shipments. In the meantime, EM is working to identify alternative disposal sites for low-level and mixed low-level waste.

TOPIC GROUP UPDATES

Presentations from the Topic Group Updates can be found on the TEC Website: www.ntp.doe.gov/tec

TRAGIS Demonstration

Demo of the Transportation Routing Analysis Geographic Information System (TRAGIS) – Paul Johnson (ORNL)

Summary:

Mr. Paul Johnson, Oak Ridge National Laboratory (ORNL) provided a demo on the application of the Transportation Routing Analysis Geographic Information System (TRAGIS) model to routing analyses for spent nuclear fuel transportation. RW is making TRAGIS available (with

training and assistance) to SRGs as a web-based tool for identifying suites of legally compliant routes (highway and rail) and analyzing the differences between them. The tool allows the user to identify routes that are compliant with Highway Route Controlled Quantity (HRCQ) requirements and State-preferred route designations already filed with the Federal Motor Carrier Safety Administration (FMCSA). It includes over 235,000 miles of roads and 150,000 miles of rail. The model will allow the user to analyze alternative routing combinations, showing various attributes such as driving distance, estimated driving time, number of States and Tribal lands that the route passes through, number of urbanized areas, population along the route, etc. Mr. Johnson walked the group through several examples (origin to destination) of a routing analysis using TRAGIS

Summary of Investment Planning/Operations Logistics Model Demonstration – *Dean Jones (SNL)*

The Operations Research & Computational Analysis (ORCA) group at Sandia National Laboratories (SNL) provided a demonstration of the Investment Planning Model (IPM), the first of three modules of the Logistics Modeling effort to support planning, development and operation of a safe, secure and efficient transportation system for the RW Office of National Transportation (ONT). The IPM is a decision support tool designed to assist the RW in determining the investment strategy for acquiring essential transportation-related assets within the constraints of the complex transportation cycle of waste acceptance, transportation, and repository limits. These decisions include the number of transport casks, railcars, and trucks that need to be purchased in order for the DOE to fulfill its obligations for the acceptance and disposal of spent nuclear fuel in a fiscally responsible manner.

Using an optimization-based modeling approach, the IPM provides a resource investment planning strategy to address the utility allocations and repository disposal target volumes while considering the total cost. The investment planning strategy can either be provided to the user as a model output under the conditions of meeting all feasible acceptance and disposal requirements, or can be provided by the user as a model input to determine the impact of the strategy on meeting these requirements. Users can set or choose model parameters such as storage site and repository cask capacities and loading/unloading times, asset fabrication costs and times and pre-selected transportation routes and modes (obtained from TRAGIS) in their model scenario evaluation. The IPM also allows users to view waste acceptance data regarding inventories and locations (reactor, site or state) and transportation cask characteristics. Representing Sandia was Mr. Dean Jones who provided an overview of the IPM user interface, highlighting data viewing capabilities and model parameter controls, showed model output results from various scenarios and illustrated the impact of key model parameters on the associated investment plans and volumes of material received at the repository.

Summary of Evaluations

Only eighteen evaluation forms were received (16 percent of the participants). Of those evaluations, the overall rating for the September 2004 TEC meeting by participants who returned an evaluation form was “good”.

The Topic Group sessions were deemed “Very Useful” or “Somewhat Useful” by respondents. The respondents liked the topic groups sessions being held the first day of the meetings and the time allotted to accomplish work. The comments included the suggestions: 1) to schedule the topic group meetings sequentially to avoid overlapping sessions and 2) to hold a concurrent session consisting of short presentations on topics of interest to avoid down-time for those attendees not participating in the topic group sessions. Although those who responded to the

survey found the Security Topic Group to be “Very Useful,” even “Excellent,” 43 percent of the responders commented that they were very disappointed that the Security Topic Group was a closed session, with no advance notice to TEC members who had applied for membership in that Group.

The Domestic and Foreign Transportation Experience presentations and the RW Infrastructure Update were rated “Very Useful” and the respondents enjoyed hearing the perspectives of the speakers.

Again, Section 180(c) funding was noted as a topic of interest to continue to be addressed in future TEC meetings. Specific topics of interest mentioned were the distribution of funds through SRGs, finalizing a funding formula, and identifying how to expedite this process. Other topics of interest are to continue to focus on routing issues and having regional groups report on progress of routing projects; mode/route plans for specific reactors such as Prairie Island (rail), Indian Point (truck) and Turkey Point (barge); and the use of dedicated versus key trains. In addition, participants would like an update on how the contacts were made with Tribes and the outcome of these contacts.

Some of the emerging issues for TEC to address were briefing on Nevada rail spur, 180(c) funding formula and alternative funding mechanism for States to receive money in connection with RW shipments, training issues, 2010 to 2016 contingency plan for Yucca Mountain project if no rail spur is available and use of legal weight truck transportation casks on rail, a clear understanding of the litigation that is affecting Yucca Mountain, and avoiding duplication of Homeland Security directives.